



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PATENT

#9 Reply  
Brief  
10/22/02  
Brown

**In re Application of:** Kenneth D. Ceola  
**Application No.:** 09/538,785  
**Filed:** March 30, 2000  
**For:** Magnetically Sensed Second Environment Safety And Arming Device  
**Examiner:** Jordan M. Lofdahl  
**Group Art Unit:** 3644

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Box AF  
Commissioner for Patents  
Washington, D.C. 20231

OCT 10 2002

Docket No.: A39.2-8766

**GROUP 3600**

**REPLY BRIEF**

This Reply Brief, filed pursuant to 37 CFR §1.193(b)(1) is in furtherance of the

Notice of Appeal and Brief on Appeal in this case, and in response to the Examiner's Answer mailed August 5, 2002. This reply brief is transmitted in triplicate.

In the event that an extension of time is necessary, Applicants request that this communication be considered to include such petition, and that any extension fee be billed to Deposit Account No. 22-0350.

Appellant incorporates herein the contents of the Appeal Brief filed May 21, 2002.

Appellant notes that the Examiner agrees that the Summary of Invention and Statement of the Issues set forth in Appellant's Brief on Appeal are correct. Appellant further notes that the Examiner appears to agree with the Appellant's grouping of claims as presented in the Appeal Brief.

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In regard to the argument present in the Examiner's Answer, Appellant observes that the Examiner's Answer fails to address the arguments presented in the Appeal Brief of May 21, 2002. Rather than respond to the Appellant's assertion that U.S. 5,497,704 to Kurschner et al (Kurschner) and/or U.S. 3,608,494 to Ziemba fails to teach or suggest a safety and arming apparatus having all of the features of claims 1-9 and a method for safing and arming a projectile as recited in claims 10-14, the Answer merely reiterates those arguments that were previously presented in the Final Office Action of December 11, 2001.

Kurschner is not directed to a novel safing and arming device and method as the present claims are, but rather is directed to a novel magnetic sensor capable of detecting and determining various aspects of a projectile's flight, such as: the spin rate of the projectile (column 4, lines 4-6), the muzzle velocity of the projectile (column 4 lines 40-42), the number of turns for a given muzzle velocity in order to determine the range to burst of the projectile (column 4 lines 13-15), etc. Kurschner utilizes this information to accurately establish a range dependent burst (column 4, lines 12-15). There is nothing in Kurschner however, which teaches or suggests that establishing such a range dependent burst includes the use of one or more of the environments described to *arm* the fuze. Assuming Kurschner includes a known arming mechanism such as is suggested, arming of the fuze would be accomplished upon the detection of set back and the electronic detection of muzzle exit (see column 7, lines 44-47). Such arming would take place prior to establishing or detecting any of the muzzle velocity, spin rate, number of turns of the projectile, or the establishment of the range dependent burst.

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In support, Appellant notes that Kurschner refers to muzzle exit as a “a true electronic *second* environment confirmation” (Id. (emphasis added)). The various environments detectable or established by the Kurschner device occur after the second environment of muzzle exit occurs (See FIG. 6 and column 7 lines 48-57). It is only logical for Kurschner to refer to muzzle exit a second environment if another environment occurs and is detected prior to the detection of the muzzle exit. A typical *first* mechanically detected environment is setback which Kurschner, as all most modern fuzes, is assumed to be capable of detecting in accordance with the government procurement standards described in MIL-STD-1316.

Merely because the Kurschner device is capable of detecting and utilizing information such as spin rate, turns, etc. to establish a range dependent burst does not mean that such information is utilized to arm the fuze. In fact, as acknowledged by the Examiner, Kurschner does not even suggest using such information to arm the fuze as Kurschner is silent as to arming the fuse by any manner, let alone the specific manner described in the instant claims. (see Examiner’s Answer page 3, line 18).

As to the Ziemba reference, if Kurschner is assumed to inherently include an arming function, then there can be no motivation to look to Ziemba to provide an arming function since such a function is presumably to already be present in the Kurschner reference (see Examiner’s Answer page 3, line 18 to page 4, line 1). Moreover, even if motivation were found to combine Ziemba with Kurschner, the combination would still fail to teach or suggest all of the elements of the instant claims.

For these reasons as well as for the reasons previously set fourth in the Appellant's Appeal Brief, all of the rejections to the instant claims are respectfully overcome.

### CONCLUSION

In light of the arguments presented above Applicants respectfully request withdrawal of the rejections to claims 1-14. Claims 1-14 are pending in the Application and are in condition for allowance.

Respectfully submitted,

VIDAS, ARRETT & STEINKRAUS

Date: 9/26/02

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**NOTICE OF APPEAL FROM THE EXAMINER  
TO THE BOARD OF PATENT APPEALS AND INTERFERENCES  
IN THE UNITED STATES PATENT AND TRADEMARK**

In re Application of: Kenneth D. Ceola  
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Examiner: Jordan M. Lofdahl  
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Commissioner for Patents  
Washington, D.C. 20231

**Docket No.: A39.2-8766**

**TRANSMITTAL LETTER**

1. In regard to the above-identified application, we are submitting the attached:  
**4 pg Reply Brief in triplicate; VAS Transmittal Letter; and Postcard.**

2. With respect to fees:

- ☒ No additional fee is required.  
Attached is check(s) in the amount of \$  
☐ Charge additional fee to our Deposit Account No. 22-0350.

3. **CONDITIONAL PETITION FOR EXTENSION OF TIME**

This conditional petition is being filed along with the papers identified in Item 1 above and provides for the possibility that Applicant has inadvertently overlooked the need for a petition and fee for extension of time or for a petition and fee for any other matter petitionable to the Commissioner as required. If any extension of time for the accompanying response is required or if a petition for any other matter is required, by petitioner, Applicant requests that this be considered a petition therefor.

4. Notwithstanding paragraph 2 above, if any additional fees associated with this communication are required and have not otherwise been paid, including any fee associated with the Conditional Petition for Extension of Time, or any request in the accompanying papers for action which requires a fee as a petition to the Commissioner, please charge the additional fees to Deposit Account No. 22-0350. Please charge any additional fees or credit overpayment associated with this communication to the Deposit Account No. 22-0350.

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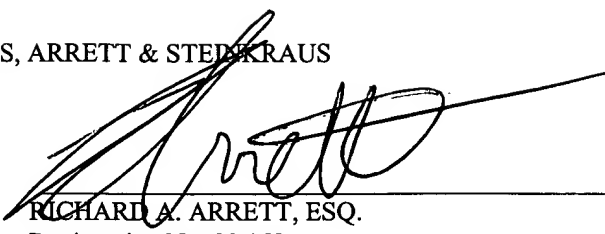
**GROUP 3600**

**TRANSMITTAL LETTER**  
**DOCKET NO.: A39.2-8766**  
**Application No.: 09/538785**

VIDAS, ARRETT & STEDKRAUS


Date: September 26, 2002

By:

  
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**Certificate Under 37 CFR 1.8:** I hereby certify that this Transmittal Letter and the paper(s) as described herein, are being deposited in the U.S. Postal Service, as FIRST CLASS MAIL, addressed to Box AF, Commissioner for Patents, Washington D.C. 20231, on September 26, 2002.

  
Julie Emerson